glabrata 20/515 (3.88%), 21/828 (2.53%) and 20/825 (2.42%), *Candida albicans* 1/515 (0.19%), 03/828 (0.36%) and 05/825 (0.60%), *Candida parapsilosis* 01/515 (0.19%), 03/828 (0.36%) and 02/825 (0.24%) were isolated in samples taken and one isolate of *Candida guillermondii* in 2008 which is the first blood culture isolation of this *Candida* spp. in Sri Lanka. The most prevalent species was *Candida tropicalis* 19/41 (46.34%), 32/59 (54.23%) and 32/59 (54.23%) followed by *Candida glabrata* 20/41 (48.78%), 21/59 (35.59%) and 20/59 (33.89%) and *Candida albicans* 01/41 (2.43%), 03/59 (5.08%) and 05/59 (8.47%). Majority of isolates were sensitive to commonly used antifungal agents locally namely fluconazole and amphotericin B.
Conclusion: The incidence is higher compared to the reported general incidence in Europe. The most prevalent species was *Candida tropicalis* which is the second most common spp in Europe. *Candida albicans* causing candidaemia in NCISL is extremely low though it was isolated in 35% of cases with haematological malignacies in Europe. *Candida krusei* has not been isolated at NCISL though it has been isolated in 12% of patients with haematological malignancies in Europe. Currently used antifungals can be continued for the management unless there is a special need for other antifungal agents for a special indication in a patient.

PP-065 A clinical analysis of nosocomial fungal infection in same hospital for 4 years

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Objective: To investigate the nosocomial fungal infection in same a hospital. The pathogens, the infection routes, the high-risk factors, the drug-resistance of nosocomial fungal infection and its relationship with the use of antibiotics in same a hospital from Jan. 2005 to Dec. 2008.
Methods: The clinical data of patients with micro-biogically documented nosocomial fungal infection were retrospectively analyzed. Pathogens were identified by fungal biochemical identification panel, antimicrobial susceptibility tests were done by disc agar diffusion test.
Results: The mean incidence rate of nosocomial fungal infections in a hospital from 2005 to 2008 was 8.04%. Most lower respiratory tract infection, accounting for 54.5%, followed by urinary tract and skin infection. Among high-risk factors, antibiotics use accounts for 42%, followed by ventilator use, accounting for 17.9%. *Candida albicans* is the major type of pathogens, accounting for 93.7%. 64 cases of drug sensitivity tests were carried out (30.9%), in which the strains were most sensitive to 5-FC, showing strongest resistance to Itraconazole.
Conclusions: Lower respiratory tract was the most frequent infection site. The main pathogens of nosocomial fungal infection were *Candida albicans* (93.7%). The management including rational use of antibiotics, microbiogical culture and susceptibility test should be strengthened to reduce the nosocomial fungal infection.

PP-066 A study on fungal flora of tap water as a potential reservoir of fungi in hospitals from Sari City, Iran

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Background: Since the incidence of mold infections in hospitalized patients with immunocompromised conditions continues to rise despite the widespread use of air filtration systems, suggesting that other hospital sources for molds may exist. In view of these facts, the objective of the present study was to evaluation of tap water samples of university hospitals as a probable potential reservoir of fungi from Sari City, Iran.
Methods: During a one-year period, 240 water samples were collected from 4 university hospitals. All water samples were collected in sterile polystyrene bottles containing sodium thiosulfate (120 mg/L). A volume of 100 ml of the samples passed through sterile 0.45 micrometer filters. The filters were placed directly on Malt extract agar (containing gentamycin and chloramphenicol) and incubated at 27°C for 3–7 days. Routine mycological techniques were applied to identification of grown fungi.
Results: Out of 240 plates, 77.5% were positive for fungal growth. A total of 498 fungal colonies were isolated. Twelve different genera were identified. *Aspergillus* (29.7%), *Cladosporium* (26.7%) and *Penicillium* (23.9%) were the most common isolated. *Phoma* (0.2%) had the lowest frequency. Among *Aspergillus* species, *A. flavus* (56.1%) had the highest frequency. Highest colony counts 145 (31.4%) were found in autumn. *Aspergillus* predominated in autumn, *Cladosporium* in winter and spring and *Penicillium* in summer. The total mean colony forming units (CFU) per 100 ml for the positive samples was 2.7.
Conclusion: The results of our study showed that hospital water should be considered as a potential reservoir of fungi specially *Aspergillus*. Fungal spores or hyphal fragments may be aerosolized in indoor air when contaminated water passes through showerheads, taps, or toilet cisterns. This could result in respiratory exposure to potentially harmful species even when air filtration systems use to eradication of airborne microorganisms from hospital wards environment.

PP-067 Intramuscular *Epicoccum nigrum* infection in an immunocompromised patient: A case report

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Introduction: *Epicoccum nigrum* is a saprophytic mould with a worldwide distribution. It is common on senescent and dead plant and soil. It is occasionally isolated as a contaminant from clinical specimens. Here we described the first reported case of intramuscular infection due to *Epicoccum nigrum* in an immunocompromised adult patient.
Case description: A-36-year-old Malay male, newly diagnosed Chronic Lymphocytic Leukemia admitted for prolonged fever, promptly treated as pneumonia with imipenem. The patient was febrile, stable vital signs and noted to have swollen, pain and erythematous arm. Ultrasound revealed hypoechoeic lesion suggestive of intramuscular abscess, but no evidence of bone involement. He was then treated as left arm cellulitis, with intravenous cloxacillin.
As the patient did not respond to antibiotics, the possibility of disseminated fungal infection was thought. Voriconazole and Amphotericin B was started empirically. A minor drainage operation was performed, pus and tissue biopsy were send for microbiological and histopathology examination. No growth were detected from pus culture. Histopathology examination showed non specific inflammation and tissue biopsy grew dermatiaceous mould on day 9 of fungal culture. Patient was still febrile although on combination of amphotericin B and voriconazole. Dose adjustment was made and Caspofungin was added to the list of combination. Later the mould was identified as *Epicoccum nigrum*. Amphotericin and caspofungin were discontinued. Voriconazole was continued, planned for up to 8 weeks.

So far, patient was afebrile after 4 weeks of voriconazole therapy. The post operatieve wound was cleaned with no pus discharged or slough.

PP-068 In vitro antifungal susceptibility of *Candida* species isolated from patients with cancer

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Background: The genus *Candida* are one of the most frequent opportunistic pathogen in patients treated with immunosuppressive agents, cytotoxic and radiotherapy. Cytotoxic drugs have a major effect on the cell-mediated immunity and patients receiving such therapy are particularly vulnerable to opportunistic *Candida* infections. Epithelial cell of buccal mucosa are very sensitive to cancer therapies which may predispose the patients to candidiasis. Invasive candidiasis is frequently associated with primary buccal infections.
The virulence and antifungal susceptibility often vary among strains. In this study, we analyzed the in vitro antifungal susceptibility of 69 Candida species isolated from patients with cancer.
Method: The clinical strains were isolated from, lip, throat and tongue of patients with cancer in four university hospitals, Mazandaran Province. These strains were previously identified by phenotypic and molecular methods. In vitro antifungal susceptibility to amphotericin B, itraconazole, fuloconazole, caspofungin was determined using the microdilution method described in the CLSI M27-A3 guideline.
Result: Fluconazole resistance was detected in 2 isolates (2.9%), among *Candida albicans* (2.5%) and *Candida glabrata* strains (8.3%). Itraconazole resistance was determined in 5 isolates (7.3%), among *Candida albicans* (5%) and *Candida glabrata* strains (20%). Amphotericin B resistance was detected in 3 isolates (4.3%), among *Candida albicans* (2.5%), *Candida glabrata* (8.3%). and *Candida tropicalis* (12.5%) strains. Caspofungin resistance was detected in one *Candida tropicalis* strain (12.5%).
Conclusion: In the present study, the antifungal activity of caspofungin was superior against clinical isolates of *Candida* species.

PP-069 Neuraminidase N1 of the 2009 pandemic swine-origin influenza A virus H1N1 has a Group-2 specific active cavity

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The 2009 pandemic influenza seemingly spreads extremely quickly with worrisome mortalities and resembles some characteristics of the previous three pandemics (1918 Spanish-flu, 1957 Asian-flu and 1968 Hong Kong-flu). The virus was recognized as a new swine-origin H1N1 influenza A virus (S-OIV). Functional and structural characterization of the neuraminidase (NA) (09N1) might give us some clues about its pathogenesis and directs the drug application. Here the 09N1 was prepared in a baculovirus-based system and its enzymatic activity was verified *in vitro*. Its crystal structure has been solved (1.9 Å) and the structure surprisingly shows a Group 2 active cavity, different from other known N1 structures which are all categorized into Group 1. The 09N1 structures in complex with substrate sialic acid, Oseltamivir (Tamiflu®) or Zanamivir (Relanza®) have also been solved at 1.8 Å, 1.7 Å and 1.9 Å respectively, showing typical binding modes and revealing the structural basis of the effectiveness of the NA-targeted drugs against the 2009 pandemic. This is the first solved NA structure derived from swine and the first complex structure with sialic acid for Group 1 members.

PP-070 Application of extracorporeal membrane oxygenation in respiratory failure patients with H1N1 influence: four cases report

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Objective: To evaluate the outcome of extracorporeal membrane oxygenation (ECMO) in critical ill patients with H1N1 influence.
Methods: From NOV15 to Dec 25, 2009, four confirmed critical ill cases of pandemic H1N1 Influence were treated with ECMO.
Results: After using of ECMO, three patients evacuated the ECMO devices successfully, two (50%) patients died and two patients had been discharged from hospital. After treatment, the oxygenation index improved from 48–77mmHg (mean 59.8) to 122–254mmHg (mean 191.8). The complications included hemorrhage, catheter infection, and thrombosis in oxygenation membrane.
Conclusion: ECMO support may be helpful in some influenza cases with severe refractory pulmonary failure despite conventional management.

PP-071 Clinical features of critically ill pregnant patients with influenza A (H1N1) infection

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Objective: To describe the clinical features of critical ill patients with H1N1 influence in pregnant women.
Methods: From May 15 to Dec 20, 2009, seventeen cases of pandemic H1N1 in pregnant women were admitted to hospital and six were critical ill patients. The clinical features and supplemental data were analyzed.
Results: They ranged in age from 22–27 years (media 24.7), the gestational weeks on falling ill was 25–36 years (media 30.5), all were in the third trimester. Two patients died, other four patients had been discharged from hospital. The most common symptoms were fever, coughing, shortness of breath, and hemoptysis. Shortness of breath and hemoptysis were only found in critically ill patients. Anemia, hypoproteinemia, elevation of CRP, LDH, HBDH and decrease of T lymphocyte subpopulations count were easily found in critically ill patients. All patients developed pneumonia and subsequent acute respiratory distress syndrome, and four patients required mechanical ventilation, three patients required Extracorporeal Membrane Oxygenation (ECMO). Emergency caesarean delivery was preformed in three patients for premature rupture of membranes (in two cases) and dead fetus in uterus (in one case) and one patient delivered a dead fetus herself in hospital. Other two patients continue their pregnancy after discharge from hospital.
Conclusion: Pregnant women might be at increased risk for critical ill complications from pandemic H1N1 virus infection, especially in the third trimester. The symptoms of shortness of breath and hemoptysis may be helpful in